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DISCOVERIES AND CURRENT EVENTS *

Austria: Knowledge Acquired on the Subject of the San José Scale (1).

Since 1931, the year in which the San José scale (*Aspidiotus perniciosus*) was observed for the first time in Austria, abundant information has been collected regarding this pest. The very interesting conclusion has been reached that the San José scale has only a very limited possibility of moving from one place to another while that of its dissemination by means of animals (birds, insects) is equally small. In fact, new centres of infection have been entirely due to importation of infested trees. The reproductive capacity of this insect is shown to be less alarming than was at first believed. In 1933, at least, Dr. Otto Watzl observed only two generations.

It must be admitted, however, that there is a possibility of the insect being able to produce three generations in certain places in specially favourable years. The reproductive capacity of the San José scale, while superior to that of the European scale insects which attack our fruit trees (*A. ostreaeformis* and *Epidiaspis betulae* having only one generation in a year), does not reach in Central Europe the extraordinary degree it can attain in California where the San José scale can produce eight generations yearly. In Austria, indeed, it often happens that trees which have been attacked for several years show scarcely any symptom of an unhealthy condition.

Taking into account the limited power of reproduction and diffusion shown by the San José scale, the result of the campaign against this pest and the efforts to check the infestation would appear to be distinctly favourable. Even in North America, in plantations which are well kept and regularly treated with insecticides, the San José scale is no longer regarded as a pest necessarily destructive to the orchards. In Central Europe there is far greater reason for this view, since the biological conditions are such that the importance of the insect may be diminished, and the damage it inflicts rendered negligible, more readily than in America.

In this connection may be mentioned the experiments made by Drs. Karl Miestinger and Otto Watzl, on behalf of the Vienna Federal Station for Plant Protection, by which it was proved that this parasite may be partially or even wholly destroyed by the use of the insecticides commonly employed in Europe,

* Under this and the next heading the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Dr. Bruno WAHL, Aulic Adviser, Director of the Federal Station for Plant Protection, Vienna.

more particularly by good qualities of carbolineum suitably applied during the period of arrested growth. It is difficult, however, to achieve complete destruction by these means, since it is necessary for this purpose to make use of very high concentrations which may be injurious to the fruit trees. Moreover, in practice, the complete destruction of these scale insects by means of chemicals will be limited by unsatisfactory execution of the control work.

Disinfection by means of hydrocyanic acid seems likely to be favoured in the future, at least in the case of nursery stock and when the treatment is given in special fumigation rooms or boxes.

After the recognition of the presence of the San José scale in Austria it seemed that it would be of interest to form an idea of the extent of the infestation. For this purpose systematic research work regarding this insect was organised in the regions most exposed to contamination, that is to say, those bordering on Hungary. These regions also offer the climatic conditions most favourable to infestation (a climate suited to the grape vine).

The researches, due to the collaboration of competent persons who have received special instruction and were specially engaged for this work, have shown that the invasion of Austria by the San José scale dates only from 1928 or, at the earliest, from 1927, and that it is chiefly the small gardens in the outskirts of towns, planted after that date with new fruit trees, which have been invaded by the pest. The reason for this is that as the Austrian nurseries were not able to meet the requirements, cheap trees procured from countries on the east, especially Hungary, were planted. The large plantations of old trees forming the centres of fruit production and supplying fruit for the town markets and for exportation are not seriously exposed to the danger of infestation. In fact the phytosanitary inspection which in 1932 was extended to several thousand vans laden with fruit for exportation, has not noted a single case of infestation of the fruit of these trees.

The investigation of the San José scale in the Republic has been extended to all fruit trees planted since the year 1924 and is carried out systematically place by place and garden by garden. The scale insects found by the seekers have been sent to the Federal Station for Plant Protection where after a microscopic examination it was decided whether it was a case of *A. perniciosus* or of a less dangerous species. Whenever infestation by the San José scale was observed the supervision was extended to older trees and also to trees and bushes belonging to other species.

When a case of infestation by the San José scale was observed the competent authorities were notified, the result generally being an order for the destruction of the infested tree by fire, with the use of paraffin.

Only in very rare cases, and on condition of an official supervision of the effect of the treatment, has the chemical disinfection of seriously affected trees been allowed. On the other hand, as regards bush fruits (gooseberries) no stronger measures are usually ordered than cutting down the shoots to the base, and treating with chemical products the stumps that remain.

The rules for the campaign against the San José scale, which have been drawn up by the Committee for the control of fruit-tree pests, in collaboration

with the Federal Station for Plant Protection and the fruit-growing inspectors of all the Federal States of the Republic, and recently issued by the Federal Ministry of Agriculture and Forests on the basis of the principles laid down, state that the destruction of infested trees is the most efficacious means of control. These rules, however, admit the possibility of achieving complete success in cases of slight infestation, by careful treatment with chemical disinfectants. It is necessary, however, that further strict tests shall be made in order to prove that the treatment has been effective. The San José Scale Committees established in the various Federal States of the Republic are responsible for the inspection of the crops against this pest.

In addition to the measures taken for the destruction of scale insects on trees known to be infected, preventive treatment is also given in every case to the trees in proximity to a centre of infestation. An autumnal treatment with carbolineum for trees and shrubs with deciduous foliage is provided for and also a spring treatment with lime sulphur spray for all trees and shrubs. Furthermore, the movement of horticultural products from infested crops is prohibited. Infested gardens and plots of land are subjected to quarantine which continues for what is recognised to be an adequate period, and until further test has given satisfactory results.

This quarantine is of special importance as regards nurseries and places where dealers have deposited trees which are for sale. No infestation of any extent has occurred in Austrian nurseries. As the infestation has usually been limited to a small number of trees it has been possible to take drastic measures without very seriously affecting the financial interests of the proprietors.

It sometimes happens that nurserymen, having noted that certain trees were infested, have voluntarily uprooted and burned the whole group. The inspection of the most important nurseries has been carried out principally by experts of the Federal Station for Plant Protection. The methods adopted in Austria for the eradication of centres of infestation have already led to results in nurseries which appear to be very satisfactory.

The Federal Government has prescribed certain measures for the inspection of plants of foreign origin. Importation from countries known to be contaminated has been limited to the greatest extent possible.

The San José scale has been observed in Austria almost exclusively on fruit trees. In addition to orchard fruits the gooseberries are found to be most susceptible to infestation. As a curious case, although of no practical importance, may be mentioned the presence of this scale insect on the petioles of strawberry and the leaves of orange lily. The scale insect has never been observed on the old wood of the grape vine. Only in exceptional cases has it been noticed on the new shoots or on stems and leaves in the immediate neighbourhood of infested fruit trees. It would seem that the pest does not find there a suitable environment and only survives for a short time. Ornamental trees and shrubs are rarely attacked.

As regards fruit, the San José scale has been observed so far only on apples and, in a single case, on plums. The risk of pears and apples serving as vectors for the diffusion of the insect appears to be very slight and could only become

serious as the result of a combination of unfortunate circumstances. There is still less to be feared from plums in this respect. In 1933, on the occasion of the inspection of imported fruits the undoubted presence of the San José scale was noted in Yugoslavia and Rumania. As a matter of fact, some consignments of apples from these countries, examined by experts of the Federal Station for Plant Protection before being released from the customs house, were found to be infested.

It is almost exclusively the trade in nursery stock which constitutes a dangerous source of infestation with the San José scale. An effective campaign must therefore include as essential measures: the control of nurseries and of their trade, the total destruction of all infested centres and preventive measures for elimination of all danger of the spread of this insect. It is known at this moment that Yugoslavia, Austria, Portugal, Rumania, Spain and Hungary are contaminated. There is reason to fear that other European countries still contain centres of infestation, though so far unknown. It would therefore be too optimistic to hope that the San José scale will completely disappear from Europe, more particularly Central Europe. It will be possible, however, by clearly recognising the danger, to suppress the serious menace represented by this insect which, moreover, consists more in difficulties to be overcome in the field of commercial politics than in the actual damage which the insect inflicts on the plants attacked, especially fruit-trees. The progress in the technique of plant protection, however, renders the campaign against the San José scale increasingly effective.

Southern Rhodesia: Locust Invasion, 1932-1934 (1).

Monthly Report No. 19. June, 1934.

The position during June has remained much the same as during May. Large swarms of Red Locusts (*Nomadacris septemfasciata*) have been reported from most districts in the Colony but they are apparently not moving about to any great extent and have attracted little notice. There has been no indication of any tendency towards definite migration, the movement of the swarms being quite irregular and including most points of the compass.

No evidence has been collected of the presence of the Tropical Migratory Locust (*Locusta migratoria migratorioides*) in any part of the Colony.

Enemies and Disease.

No reports have been received nor observations made concerning any concentration of enemies in the winged swarms. The locust fungus, *Empusa grylli*, is, however, apparently still active, at least in the Melsetter district, where exceptionally humid conditions have prevailed during the month. Natives report great mortality amongst the locusts in P. E. Africa for several month past, attributing it to both disease and maggot infestation.

(1) Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

Damage.

No reports of serious damage have been received during the month.

Outlook.

There is no definite change in the outlook.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — The customs instructions of 18 May 1934 combine in one single text the regulations concerning the San José scale (*Aspidiotus perniciosus*) and the apple maggot (*Rhagoletis pomonella*).

The text is repeated of the first Decree of 3 November 1931 regarding these two insects [see this *Bulletin*, 1932, No. 2, pp. 24-25] modified by the amendments of 8 July 1932 and 20 April 1933 [see this *Bulletin* ,1932, No. 11 p. 182, and 1933, No. 6, pp. 127-128]. Then follows the text of the Decree of 11 June 1933 [see this *Bulletin*, 1933, No. 9, pp. 201-202] modified by the amendment of 1 March 1934 [see this *Bulletin*, 1934, No. 5, pp. 102-103]. Then come the Decrees of 3 November 1931 and 15 March 1934, referring to the customs posts authorised to accept consignments of fresh fruit, living plant and parts of living plants subject to phytosanitary inspection [see this *Bulletin*, 1932, No. 2, pp. 24-25, and 1934, No. 5, p. 103]. Finally, there appears the text of two Circulars of 26 November 1931 and 31 January 1934 respectively [see this *Bulletin*, 1934, No. 5, p. 102] which deal with the practical application of regulations concerning the San José scale and the apple maggot. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juli 1934, Bd. VI, Nr. 4, S. 63-69).

*** By the Decree of 31 May 1934, providing safeguards against potato wart disease [*Synchytrium endobioticum*] it is decided that official certificates accompanying consignments of potatoes from the Netherlands, Belgium and Luxembourg shall be valid only when such consignments come directly from any of the above mentioned countries and have been brought into contact with no other country. (*Ibid.*, S. 70).

*** As the result of an agreement with the Spanish Government which became effective on 27 June 1934, it was laid down that the declaration that imported potatoes have been harvested in the same year shall be made by an expert of the Spanish phytopathological Service and noted on the phytosanitary certificate. This regulation is based on the Decree of 7 March 1930, which aims at providing safeguards against potato wart disease [see this *Bulletin*, 1930, No. 8, pp. 123-124]. (*Ibid.*).

*** By the Decree of 5 June 1934 there is given the list of customs posts authorised to accept consignments of fresh fruit, living plants and parts of living plants, subject to phytosanitary inspection. (*Ibid.*, S. 70-71).

*** By Decree of 11 June 1934 providing safeguards against the cherry fruit fly [*Rhagoletis cerasi*], the customs posts of Herzogenrath, Zittau and Voitersreuth are authorised to accept consignments of fresh cherries intended for importation. (*Ibid.*, S. 71).

Germany (**Baden**). — By Ordinance of 30 April 1934 on the protection of bees it is forbidden to treat asparagus plants with arsenical powders. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juni 1934, Bd. VI, Nr. 3, S. 45).

Germany (**Bavaria**). — The Notification No. 5350 b8, of 7 June 1934, contains information on the means of detecting traces of hydrocyanic acid gas in places fumigated by this poison. (*Gesetz-u. Verordnungs – Blatt für den Freistaat Bayern*, München, 23. Juni 1934, Nr. 17, S. 285).

Germany (**Prussia**). — By Ordinance of 22 January 1934, concerning the control of the diseases and pests of fruit trees, it is prescribed, in the district of Hanau, province of Hesse-Nassau, to clean, during the winter months, the trunks of fruit trees, to remove dead branches, to prune and treat them with parasiticides.

A Committee should be formed in each Commune to examine every year, before 15 October, all fruit trees and to establish such measures as should be taken. It should, through the medium of the police authorities, oblige proprietors and usufructuaries to carry out the measures considered necessary. If the work is not done by the stated time the police will be empowered to execute the work at the expense of those interested.

The police authorities can also, if special conditions seem to demand it, omit to call in the help of those interested and organise and carry out the control themselves according to the directions of experts, and divide the expenses between those interested. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Juni 1934, Bd. VI, Nr. 3, S. 48-50).

*** By Ordinance of 17 April 1934 the control of *Galinsoga parviflora* ('Franzosenkraut') is made obligatory in the district of Stade, province of Hannover.

This weed should be removed from all land, with the exception of that cultivated in cereals, before 1 July. The plants with their roots should be thrown into holes and lime added if possible. The holes should then be filled in with a layer of earth at least 30 cm. deep. The young plants appearing after 1 July should also be destroyed. A Committee will be formed in each Commune to inspect fields between the 1st and the 15th of July and to repeat it about every four weeks during the following three months. (*Ibid.*, S. 47-48).

*** By Ordinance of 3 May 1934 the control of diseases and pests of fruit trees is made obligatory in the province of West Prussia. It is entirely forbidden, in view of the protection of bees, to spray fruit trees in flower with arsenical products. (*Ibid.*, S. 46-47).

*** By Ordinance of 8 May 1934, the control of cockchafer beetles [*Melolontha*] is made obligatory in the district of Belzig, province of Brandenburg. (*Ibid.*, S. 45).

*** By Ordinance of 11 May 1934 relating to the control of the caterpillars of the nun moth [*Lymantria monacha*] carried on in the districts of Stallupönen and Goldap between 15 May and 15 July with the help of aeroplanes and mechanical dusting apparatus, it is prohibited to pass along the roads leading into the zone to be treated from the time that they are closed by the police and their assistants, or that transit is forbidden by means of special red-edged notices.

It is also forbidden during a certain period the duration of which will be published in the Official Journal to penetrate into the zone where the treatment will be carried on, to gather berries, mushrooms, grass, etc., to drive horses or live stock through it or to let them graze on the borders of the public roads, to allow bees to enter the zones or poultry to run freely there. It is also prohibited to approach the landing places of the aeroplanes. (*Ibid.*, 1. Juli 1934, Bd. VI, Nr. 4, S. 71-72).

*** By Notification of 16 May 1934, in the district of Erfurt the premium granted for each musk rat [*Fiber zibethicus*] killed has been fixed at 0.50 RM for the persons engaged by the State for the purpose and at 0.80 RM for private persons. (*Ibid.*, S. 72).

France. — By Decree of the Minister of the Colonies, dated 19 June 1934, Art. 5 of the Ministerial Decree of 27 February 1922, on the protection of coffee plantations against the coffee berry borer [*Stephanoderes hampei*], has been modified as follows:—

Art. 1. — The second paragraph of Art. 5 of the Ministerial Decree of 27 February 1922 is qualified as follows:—

' The prohibitions included in Art. 1 of the present Ministerial Decree are applicable to the products designated coming from the Dutch East Indies, from Malaya, British West Indies, Brazil, French West Africa, French Equatorial Africa, the French Cameroon and Belgian Congo, as well as from countries where the importation of these products is neither prohibited, nor subjected to phytopathological control '. (*L'Agronomie Coloniale*, Paris, août 1934, 23e année, nº 200, p. 59-60).

*** The Law of 29 June 1934, which tends to insure the good marketable quality of fruits and vegetables and to suppress the sale of worm-eaten fruit, establishes, *inter alia*, the following:—

Art. 2. — Ministerial Decrees will decide under what conditions the use of a declaration will be made guaranteeing that French fruits put on sale do not contain ' worms '. The agents of the Service for the suppression of fraud will have the right to write, in indelible characters, the words ' rotten fruit ', on the cases which contain a percentage of worm-eaten fruit higher than that which

has been determined by the above Decrees even though bearing the declaration of guarantee.

Art. 3. — When the situation in French arboriculture permits, the Government will be able to forbid, on the judgement of a Commission nominated by the Minister of Agriculture, the sale for table consumption of fruit containing a percentage of worm-eaten fruit higher than a determined rate, which may be subsequently modified by Decree of the Minister of Agriculture. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements Agricoles*), Paris, 15 juillet 1934, année 1934, nº 14, p. 306).

*** By Ministerial Decree of 30 June 1934 the Ministerial Decree of 1 March 1934 [see this *Bulletin*, 1934, No. 5, p. 107] is revoked.

The importation of seed potatoes originating in and coming from Great Britain will be possible under the conditions provided for by the Ministerial Decree of 17 January 1933, and dependent on a certificate delivered by the Phytosanitary Service of Great Britain.

This certificate will testify:—

(1) That the seed potatoes have been gathered at a place more than 75 kilometres distant from the nearest Colorado beetle infection [*Leptinotarsa decemlineata*].

(2) That the consignment has been examined and passed as free from insects, cryptogams and all other dangerous organisms liable to propagate themselves in agricultural districts or orchards.

The inspection necessary for the delivery of the certificate should have been made two weeks at most before the date of shipment. (*Ibid.*, p. 319).

Luxemburg (Grand Duchy of). — By Decree of 29 May 1934 concerning the invasion and propagation of grape phylloxera [*Phylloxera vastatrix*], authorisation to cultivate grafted vines is accorded to the vine-growers and associations of vine-growers constituted according to the Law of 27 March 1900, on the agricultural associations. Plants of grafted vines can only be sold at the Viticultural Station of Remich.

The Government fixes from year to year the number of plants that the State engages to buy from the vine-growers and the associations of vine-growers.

The stocks and buds are delivered free of charge by the Viticultural Station which is alone charged with the importation of stocks and buds.

The price paid by the State to suppliers of grafted vines is fixed annually by the Government on the proposals of the Director of the Viticultural Station and on the advice of the Chamber of viticulture.

On delivery all suppliers are obliged to label the bundles of plants with the name of the producer and the number and variety of vine-slips and stocks.

It is forbidden to sell or give grafted plants to buyers other than the State.

Nurserymen growing plants for sale are obliged to submit their nurseries to the inspection of the Viticultural Station. (*Mémorial du Grand-Duché de Luxembourg*, Luxembourg, 2 juin 1934, nº 30, p. 621-622).

Morocco (French Zone). — A Vizirial Decree of 8 June 1934 (25 safar 1353) modifies the Vizirial Decree of 17 May 1933 (22 moharrem 1352) [see this *Bulletin*, 1933, No. 9, p. 207] fixing the rate of the fee payable for cost of sanitary inspection for the import of plants, parts of plants or vegetable products into the French Zone of Morocco. (Empire Chérifien. Protectorat de la République Française au Maroc. *Bulletin Officiel*, Rabat, 29 juin 1934, XXIII[e] année, n° 1131, p. 595).

*** A Dahir of 21 June 1934 (8 rebia I 1353) institutes the technical control of the production for export and a Vizirial Decree of the same date refers to the application of this control. (*Ibid.*, p. 588-591).

*** A Decree of the Director general of Agriculture, Commerce and Colonisation relative to the technical control of different agricultural products for export, dated 22 June 1934, among other things establishes the following:—

(a) Barley, maize, sorghum, rye, canary grass, millet should not contain more than 3 % of damaged grain.

(b) Oats should not contain more than 200 grammes of ergot [*Claviceps purpurea*] per 100 kilos of oats.

(c) Flax should not contain more than 0.5 % of seed touched by damp, that is to say musty.

(d) All merchandise conserved in silos, to be of good marketable quality, should not contain more than 4 % of musty seed with the exception of the specification already made for flax. (*Ibid.*, p. 603-604).

*** Nine other Decrees of the Director general of Agriculture, Commerce and Colonisation, dated 22 June 1934, refer to the control of oranges, artichokes, carrots, peas, fresh beans, marrows, potatoes, haricot beans and tomatoes for export.

It is established, *inter alia*, that these different agricultural products should be excluded as unfit for export if they are not free from all diseases or damage by insects. (*Ibid.*, 6 juillet 1934, n° 1132, p. 637-642).

*** A Decree of the Director General of Agriculture, Commerce and Colonisation, dated 28 July 1934, relative to the control of agricultural products exported from Morocco, establishes that these (salads, peppers, melons, fennel, parsley, asparagus, aubergines, onions, swedes) should, among other things, be free from insects and diseases. (*Ibid.*, 10 août 1934, n° 1137, p. 755-756).

Mexico. — In view of the recent introduction of four species of the genus *Anastrepha* (*A. ludens*, *A. striata*, *A. serpentina*, *A. fraterculus*) into the defence zone of the North-East where these Diptera have invaded the States of Nayarit and Sinaloa and menace the State of Sonora and the Territories of Baja California, by the internal Quarantine No. 4 of 10 April 1934 and the Regulations relative to it, measures have been established to combat the above mentioned fruit flies.

These measures relate to: the circulation of products subject to quarantine, of which a list is given; works of fumigation, disinfection and sterilisation; delivery of certificates and permits; means of transport; systematic organisation of the control campaign; the attributes of State Committees and ' Juntas ' of agricultural defence; obligation of farmers; the attributes of inspectors; the collaboration of farmers and the Southern Pacific railway with the inspectors in work on the biology of the flies; sanctions to apply to offenders. (*Diario Oficial*, México, 12 de mayo de 1934, tomo LXXXIV, núm. 9, págs. 168 a 172).

Palestine (1). — By Notice of 4 September 1933, Rosh Pinna, Ras en Naqura, Zikhron Ya' aqov, and Jenin have been declared places where any plant inspector may open or search any package, case or piece of personal luggage which he has reasonable cause to suspect contains or contain plants or parts of plants the transport of which from one part of Palestine to any other part thereof is forbidden.

*** By the Prohibition of the Importation and Movement of Organic Manure (Abolition) Regulations, 1933, dated 18 October 1933, the Regulation of 24 September 1930 is cancelled.

*** By Order of 12 December 1933, the potato tuber moth (*Phthorimaea operculella*) has been declared to be a pest within the meaning of the Plant Protection Ordinance, 1924.

*** By the Plant Protection Order, 1934, dated 22 January 1934, the Order of 30 January 1931 is amended by the addition of the following items: —

Myrtle.
Myrtus communis.

*** By the Plant Protection Regulation, 1934, dated 22 January 1934, the Plant Protection Regulations, 1933 are amended by the addition to the schedule thereto of the following items: —

Myrtle.
Myrtus communis.

*** By the Plant Protection Order (No. 2), 1934, dated 26 February 1934, all plants not included in the two schedules to the said Order may be imported into Palestine provided that they are first inspected by a plant inspector at the place of entry.

The importation of all plants in the schedule I is prohibited provided that the prohibition does not apply to preserved, dried or compressed fruits or to mango (*Mangifera* spp.) seeds which are the bona fide produce of Egypt:—

Musa spp., all species of *Citrus* other than citrus fruits from Egypt and Cyprus, *Anona* spp., *Ficus* spp., *Mangifera* spp., *Persea* spp., *Melia azadirachta*, *Carica papaya*, *Solanum*

(1) From documents communicated by the official correspondent of the Institute, Mr. E. BALLARD, Government Entomologist, Department of Agriculture and Forests, Jerusalem, Palestine.

melongena, Lypersicum esculentum, Punica granatum, Cajanus indicus, Psidium guajava, Morus spp., palms including dates and date palms, *Gossypium* spp. (except ginned cotton), *Hibiscus* spp., *Jasminum* spp.

The importation of plants in the schedule II is permitted provided that they are accompanied by a certificate signed by an officer of the Phytopathological Service of the country of origin stating that they are free from the under-mentioned pests or diseases:—

	Must be certified free from:—
Vitis vinifera.	*Phylloxera [vastatrix].*
Citrus fruits from Egypt or Cyprus.	*Chrysomphalus aurantii, C. ficus.*
All fruits and vegetables from Egypt.	*C. ficus, Phenacoccus hirsutus.*
Apples and pears, whether nursery stock or fruit from the U. S. A., Canada, Australia or Hungary.	*Aspidiotus perniciosus.*
Maize seed.	*Sclerospora graminicola.*
Bean seed.	*Colletotrichum lindemuthianum.*
Potato seed.	*Synchytrium endobioticum, Bacillus phytophthorus, Spongospora subterranea, Phthorimaea operculella, Leptinotarsa decemlineata.*
Cabbage seed or cauliflower seed.	*Pseudomonas campestris.*
Rosé, apple, quince and pear nursery stock.	*Bacterium tumefaciens.*
Fresh cherries.	*Rhagoletis cerasi.*
Fresh peaches.	*Clasterosporium carpophilum.*
Citrus nursery stock and bud wood. mango.	*Pseudomonas citri, Sphaceloma fawcetti, Bacillus mangiferae, C. ficus, C. personatus, Phenacoccus mangiferae,* and all species of *Trypetidae.*
Potatoes.	*Phth. operculella, L. decemlineata.*
Carobs.	*C. ficus, C. personatus.*
Ficus sp.	*C. ficus, C. personatus.*

All plants included in the schedules which are required for experimental or scientific purposes may be imported provided that the written permission of the Director of Agriculture and Forests is obtained at least seven days before the date of importation.

All plants intended for propagation and which are not included in the schedules may be imported if they are accompanied by an official certificate stating them to be apparently free from disease or insect pests. Importation of nursery stock shall only be made through the ports of Jaffa and Haifa, and the Railway Stations at Gaza and Jerusalem.

Plants which are the bona fide produce of Trans-Jordan may be imported without restriction.

No organic manure and soil except special potting soil and manure, and soil from Trans-Jordan may be imported provided that this prohibition shall not apply to manufactured organic manures, guanos and ' poudrettes '.

*** By the Plant Protection Regulation (No. 2), 1934, dated 26 February 1934, the Director of Agriculture and Forests may authorise the removal, transfer or conveyance of any plant from one part of Palestine to any other part thereof, not withstanding that such removal, transfer or conveyance is prohibited by Regulations under the Plant Protection Ordinance, 1924.

*** By the Prohibition of Importation (Plant Diseases) Order, 1934, dated 26 February 1934, no living insect, insect bacterial, fungus or other pest or disease of plants or insects shall be imported into Palestine unless the written permission of the Director of Agriculture and Forests is obtained at least seven days before the date of importation.

Czechoslovakia. — By Notification of 22 March 1934, the Minister of Agriculture has fixed the charges to be made for the phytosanitary inspection of consignments of potatoes on entering the country. The charges range from 250 Kč per wagon to 100 Kč for each wagon up to 8 wagons and at 50 Kč above 8 wagons up to a maximum of 12 wagons, always supposing that the wagons arrive on the same day.

If the phytosanitary inspection, instead of being made at the frontier, is made in the country itself at the Service for plant protection no charge is made.

Imported potatoes cannot be put on sale until the Service for plant protection has received the indemnity for inspection which is due and the Administrations of railways and posts have been reimbursed for expenses incurred. (*Deutsches Handels-Archiv*, Berlin, 1. Juli 1934, 88. Jahrg., 1. Juliheft, S. 2514-2515).

Union of South Africa (Swaziland). — By Proclamation No. 15 of 1934, dated 16 April, 1934, the section 2 of the Swaziland Locust Destruction Proclamation, 1924 (No. 44 of 1924) is repealed and the following section substituted therefor:—

(1) The occupier of any land whereon flying locusts appear or have appeared, or deposit or have deposited eggs or whereon any voetgangers appear or have appeared, shall, as soon as the fact is brought to his knowledge, with reasonable speed give notice thereof to the nearest official.

(2) In giving such notice he shall state as nearly as may be the locality on his land where flying locusts have appeared or are depositing or have deposited eggs or where voetgangers have appeared, and give such other information as may have been prescribed by regulation.

The subsection (1) of section 4 of the said Proclamation of 1924 is amended by the insertion of the words ' flying locusts ' before the words ' locust eggs or voetgangers ' where they first occur in that subsection. (*Official Gazette of the High Commissioner for South Africa*, Pretoria, 20th April, 1934, Vol. CXXVI, No. 1713, p. 7, in *The Union of South Africa. Government Gazette*, Pretoria, 20th April, 1934, Vol. XCVI, No. 2189).

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[Bacterial diseases of *Morus nigra, M. rubra, Matthiola incana, Phaseolus vulgaris, Juglans*, almond, peach, *Nerium Oleander*, lemon (fruits).
At the present time, it has not been possible to identify with any certainty the pathogenic agents of all these affections].

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NOTES

International Competition for the Investigation of a Remedy against 'Mal Secco' Disease of Citrus. — The 'Camera Agrumaria' of Messina, Italy has opened to scientific students of all nationalities a competition with a single prize of 100,000 liras, to be awarded to the competitor who discovers a really efficacious method capable of practical and economic application for control of the propagation of and damage done by the 'mal secco' disease of citrus (*Deuterophoma tracheiphila*).

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